

REMARKS/ARGUMENTS

Claims 15-17 and 19-28 are pending in this application. By this Amendment, Applicant amends the Substitute Specification and Claims 15-17, 19, 21, 24, and 25 and cancels Claim 18.

Claims 19-25 have been withdrawn from further consideration because these claims are directed to non-elected species. Claims 19-25 are dependent upon generic Claim 15. Accordingly, Applicant respectfully requests that the Examiner rejoin and allow Claims 19-25 when generic Claim 15 is allowed.

The specification was objected to for containing minor informalities. Paragraph [0043] of Applicant's originally filed Substitute Specification has been amended to correct the minor informalities noted by the Examiner. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this objection.

Claim 15 was rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Tamura (JP 2000-101348) in view of Takehara et al. (U.S. 6,815,810). Applicant notes that it appears that the Examiner has incorrectly described the rejection of Claim 15, and that the Examiner should have described the rejection of Claim 15 as being under 35 U.S.C. § 102(b) as being anticipated by Tamura, or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Tamura in view of Takehara et al. Claims 16 and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Tamura. Claims 16, 17, and 26-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamura in view of Takehara et al. Applicant respectfully traverses the rejections of Claims 15-17 and 26-28.

Claim 15 has been amended to recite:

A composite ceramic substrate comprising:
a ceramic substrate including a surface-mounted component mounted thereon;
at least one wiring pattern disposed in the ceramic substrate;
a plurality of external terminal electrodes connecting the at least one wiring pattern to a surface electrode of a motherboard;
a plurality of convex leg portions made of resin and arranged

on the ceramic substrate such that a first end surface of each of the plurality of convex leg portions supports a respective one of the plurality of external terminal electrodes and a second end surface of each of the plurality of convex leg portions opposite to the first end surface is in direct contact with and directly connected to the ceramic substrate; and

a via-hole conductor provided in each of the plurality of convex leg portions and connecting the respective one of the plurality of external terminal electrodes to the at least one wiring pattern; wherein

the plurality of convex leg portions are arranged so as to be spaced apart from one another. (emphasis added)

The Examiner alleged that Tamura teaches all of the features recited in Applicant's Claim 15, including a ceramic substrate 12, at least one convex leg portion 25 made of resin and arranged on an external terminal electrode 16 (see paragraph [0007] of Tamura) and a via-hole conductor 27 provided in the convex leg portion 25 and connecting the external terminal electrode 16 to a wiring pattern in the ceramic substrate 12.

Alternatively, the Examiner alleged, "Takehara in figure 1 discloses a structure with substrate 2 formed of low temperature co-fired ceramic laminate (column 6, line 9-17) with via hole conductor (12) in the bottom resin layer formed of conductive resin (column 5, line 40-50). The resin layer in contact with the ceramic substrate will have better adhesive strength."

Thus, the Examiner concluded that it would have been obvious "to provide the structure of Tamura with a second end surface of the at least one convex leg portion opposite to the first end surface is in direct contact with and directed connected to the ceramic substrate, as taught by Takehara, in order to have better adhesive strength."

Applicant's Claim 15 has been amended to recite the features of "a plurality of convex leg portions made of resin and arranged on the ceramic substrate such that a first end surface of each of the plurality of convex leg portions supports a respective one of the plurality of external terminal electrodes and a second end surface of each of the plurality of convex leg portions opposite to the first end surface is in direct contact with and directly connected to the ceramic substrate" and "the plurality of convex leg portions

are arranged so as to be spaced apart from one another.”

Support for these features is found, for example, in paragraph [0045] of Applicant's originally filed Substitute Specification and in Figs. 1A to 1C of Applicant's originally filed drawings. Applicant respectfully submits that since each of the features added to Applicant's Claim 15 is included in the embodiment shown in Figs. 1A to 1C and described in paragraph [0045] of Applicant's originally filed application, Applicant's Claim 15, as amended herein, is directed to the species shown in Figs. 1A to 1C, which Applicant elected in the Response to Election Requirement filed on May 8, 2009.

In contrast to Applicant's Claim 15, Tamura teaches “an annular surrounding wall 25,” which the Examiner alleged corresponds to the convex leg portion recited in Applicant's Claim 15 (see, for example, paragraph [0007] of the English machine translation of Tamura). In other words, at best, Tamura merely teaches a single annular surrounding wall 25 that completely surrounds the crystal oscillator 13. Tamura fails to teach or suggest that the wall 25 could or should have any configuration other than a single annular surrounding wall, and certainly fails to teach or suggest that the wall 25 of Tamura could or should be defined by a plurality of convex leg portions that are spaced apart from one another.

Thus, Tamura clearly fails to teach or suggest the features of “a plurality of convex leg portions made of resin and arranged on the ceramic substrate such that a first end surface of each of the plurality of convex leg portions supports a respective one of the plurality of external terminal electrodes and a second end surface of each of the plurality of convex leg portions opposite to the first end surface is in direct contact with and directly connected to the ceramic substrate” and “the plurality of convex leg portions are arranged so as to be spaced apart from one another” as recited in Applicant's Claim 15.

As noted above, Takehara et al. was relied upon merely to allegedly teach “a structure with substrate 2 formed of low temperature co-fired ceramic laminate (column 6, line 9-17) with via hole conductor (12) in the bottom resin layer formed of conductive resin (column 5, line 40-50).” Takehara et al. fails to teach or suggest any convex leg

portions whatsoever, and certainly fails to teach or suggest the features of “a plurality of convex leg portions made of resin and arranged on the ceramic substrate such that a first end surface of each of the plurality of convex leg portions supports a respective one of the plurality of external terminal electrodes and a second end surface of each of the plurality of convex leg portions opposite to the first end surface is in direct contact with and directly connected to the ceramic substrate” and “the plurality of convex leg portions are arranged so as to be spaced apart from one another” as recited in Applicant’s Claim 15. Thus, Takehara et al. clearly fails to cure the deficiencies of Tamura described above.

Therefore, Applicant respectfully submits that Tamura and Takehara et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicant’s Claim 15.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 15 as being under 35 U.S.C. § 102(b) as being anticipated by Tamura, or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Tamura in view of Takehara et al.

In addition, Applicant respectfully submits that it would not have been obvious to modify the device of Tamura so as to include a plurality of convex leg portions that are spaced apart from one another instead of the single annular surrounding wall 25.

As disclosed in the English language Abstract and in the English language machine translation of Tamura, in each and every embodiment disclosed in Tamura, the lid 5, cap 15, and annular surrounding wall 25 (which are alternatively used) are provided **to enclose** a space of a ceramic board that includes a crystal vibrator.

If the device of Tamura was modified so as to include a plurality of convex leg portions that are spaced apart from one another in place of the annular surrounding wall 25, then the plurality of convex leg portions would have been unsatisfactory for the intended purpose of the annular surrounding wall of enclosing a space of a ceramic board that includes a crystal vibrator or other similar structure.

The Examiner is reminded that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) and MPEP § 2143.01.

In view of the foregoing amendments and remarks, Applicant respectfully submits that Claim 15 is allowable. Claims 16, 17, and 26-28 depend upon Claim 15, and are therefore allowable for at least the reasons that Claim 15 is allowable. In addition, Applicant respectfully requests that the Examiner rejoin and allow non-elected Claims 19-25, which are dependent upon generic Claim 15.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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